CHEMICAL RELEASE CHART

A PLANNING TOOL FOR:

NON-ROUTINE TASKS

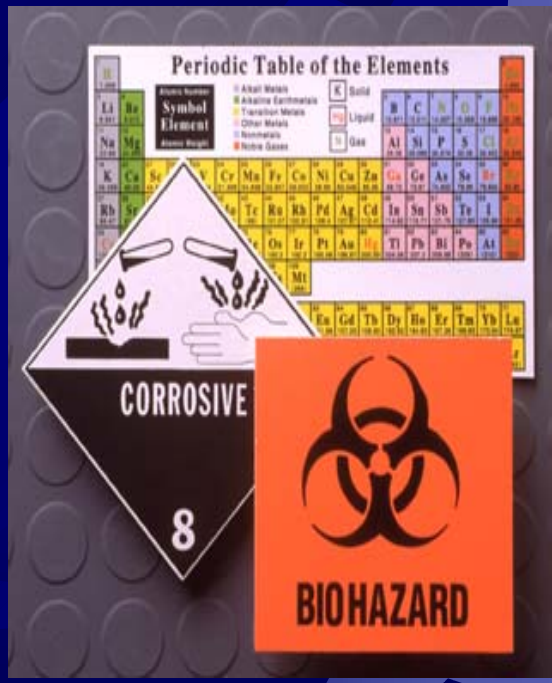
and

EMERGENCY RESPONSE

CHEMICAL RELEASE CHART

- **Catalogs Reliable Health & Safety Info**

  - Chemical Specific
  - Identifies:
    - Hazards; Physical, Chemical and Health
    - PPE Needed
    - Required ER Equipment
    - Decontamination Procedures
    - Spill Control Methods

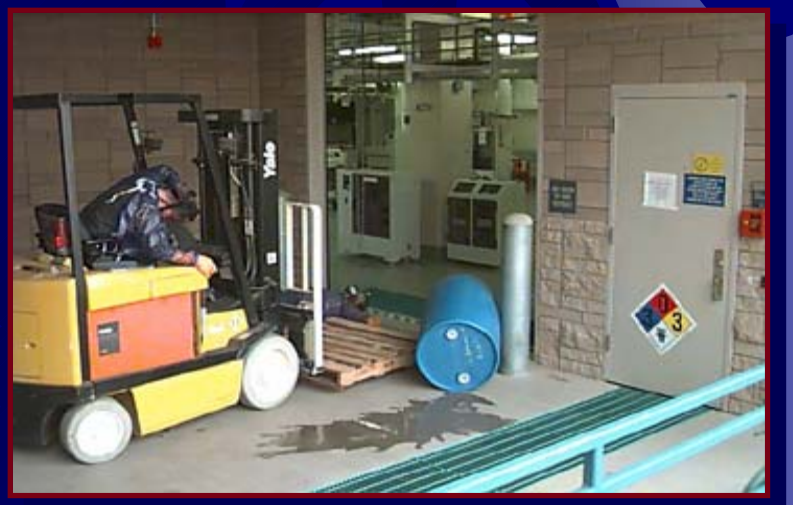


NON-ROUTINE TASKS

- **Chemical Release Charts can be a useful tool for:**
  - Tailgate Review
  - Refresher Training
  - Immediately Available for Reference

EMERGENCY RESPONSE PRE-PLANNING

- **Defines Spill/Release Benchmarks**
  - What a small spill is…
  - What a large spill is…
  - When off-site assistance is required



Chemical Release Chart

- **Product:** Anhydrous Ammonia
- **Location(s)** Engine Room
  Roof
- **Quantity** 4,000 Gallon
  Storage Tank
- **Container Size(s)** Varies
  Hot Gas Piping
  Liquid Piping Receiver

Chemical Release Chart

Hazards

- **Flash Point: N/A (**Gas) **LEL:** 15% **UEL:** 28%
  (NOTE: This is a Flammable Gas, but not per DOT)

- **Vapor Density:** Lighter
- **Vapor Press:** High
- **Specific Gravity:** Highly Soluble in Water

Chemical Release Chart

Exposure Limits

- **PEL:** 50ppm 18 mg/3
- **STEL:** 35ppm (NIOSH) 27mg/3
- **IDLH:** 300ppm

- **Reacts with:** Strong Oxidizers, Acids, Halogens

- **Corrosive: YES** Alkaline pH 11.6

Chemical Release Chart

- **Routes of entry into the body:**
  - Inhalation, Ingestion, Contact/Absorption
- **Acute & chronic health effects:**
  - Irritating to eyes, nose, throat, skin
  - Causes skin burns, frostbite
  - Concentrations >2500ppm >30 minutes, Death!

Chemical Release Chart

Personal Protective Equipment

- **Respirator:** >300ppm SCBA
  <250ppm Full Face
- **Type of filter(s):** APR Green Cartridge

Chemical Release Chart

Personal Protective Equipment

- **Suit: Level** **Material:**

A	Chemrel Challenge #6400 Breakthrough >480 min.
B	Chemrel Max Breakthrough 3-hrs

(Maximum use concentration~1200-1500ppm)

Chemical Release Chart

Personal Protective Equipment

- **Boots:** Bata Superpoly — Excellent Rating
  Bata PolyBlend — Excellent Rating
- **Eye/Face:** ANSI Splash-proof Goggles with Faceshield (8”minimum)
- **Gloves:** Ansell
  outer material: Neoprene Insulated 6-hrs.
  inner material: Nitrile Sol-vex 6hrs.

Chemical Release Chart

Spill Response Equipment

- **Air Monitoring:** MSA Passport PID, pH paper
- **Personnel Monitoring:** Heat or Cold Stress
- **Soil & Water Sampling:** N/A
- **Absorbents:** Liquids Vermiculite, Dry Sand

Chemical Release Chart

Spill Response Equipment

- **Decontaminants:** Large Volume Water Spray

  Neutralize with dilute acid

- **Other Equipment:** N/A

Chemical Release Chart

Personnel Decontamination

(Include drawing)

- **Primary Location:** Quick Drench Shower(s) North Side Building

- **Alternate Location:** Rinse Hose Loading Dock Northwest Side Building

Chemical Release Chart

Response Procedures

- **Small Spill Response**
  - Number of gallons(lbs.) <.3 lb.
  - Number of square feet 1.5’ x 1.5’ x 0.2” deep
    (NOTE: Liquid is very Cold, Frostbite Hazard)
  - Evacuate 300’ all Directions
  - Shut Valve(s) from outside hot zone
  - Ventilate, Air Monitor with MSA PID
  - Respiratory Protection: 25-250ppm FF/APR
  - Reduce Levels below 20ppm for Normal Ops

Chemical Release Chart

Response Procedures

- **Large Spill Initial Response**
  - Evacuate 1000’ all Directions
  - Consider Downwind Evacuation
  - Use Water Spray to Reduce Vapor or Divert Cloud
  - Shut Valve(s) from Defensive position
  - Ventilate Area
  - Monitor with MSA PID >1000ppm Full CPC
  - Enter Hot Zone with Level “A” (inside building)
    Level “B” (if appropriate)

Chemical Release Chart

Response Procedures

- What is the largest size spill you can handle?
  - One Ton Cylinder or 10 lb continuous **liquid** release!
- **Call for outside help? Yes, immediately…**

- **If a worker is injured, trapped, confirmed missing!**
- **Uncontrolled continuous leak >10 lbs per minute!**

Chemical Release Chart

Summary

Use as a quick reference guide or...refresher!

Information accurate when “Chart” is made!!

Thank you for your participation!!!